



Wallace  
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12/06/02 07:48 AM

To: (b) (6) (b) (6)  
cc: Chip Humphrey/R10/USEPA/US@EPA, Judy  
Smith/R10/USEPA/US@EPA  
Subject: Re: Portland Harbor Questions

Thank you for your inquiry. Responses are included below for each of your questions. Good luck on your project !! Wallace Reid.

Reid/R10/USEPA/US@EPA  
Questions  
12/05/02 10:09 PM

To: Wallace  
cc:  
Subject: Portland Harbor

Dear Mr. Reid,

I am a senior at <?xml:namespace prefix = st1 ns = "urn:schemas-microsoft-com:office:smarttags" />Banks High School doing a government project and I have chosen to do the plight of the Portland Harbor as my project. I have a couple of questions that would help me with my project. <?xml:namespace prefix = o ns = "urn:sc

1) What efforts are being done now and in the future to clean up the Portland Harbor?

The U.S. EPA has signed an agreement (called and Administrative Order on Consent) with eight private corporations, the City of Portland, and the Port of Portland, to investigate possible clean-up options for Portland Harbor. This effort will take at least three years and cost more than \$10-million dollars. This work is already underway.

2) What are the biggest obstacles to move forward in cleaning the Portland Harbor?

There are essentially two large obstacles which must be overcome to move forward cleaning up Portland Harbor:

1. The first obstacle is figuring out how to apply proper scientific principles to determine the actual risks to people and animals posed by contamination in Portland Harbor. In actual practice, EPA usually can't quantify actual risk, so we often use the best professional judgment of our scientists and engineers to estimate actual risk. Calculating estimates of actual risk based on available data is usually where most of our scientific debate and public policy controversies arise. Every decision we make in the risk area has broad implications regarding how much clean-up should be done, and how much the project will cost.

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2. The second obstacle we face after figuring out the risk component is determining the proper balance between cleaning up Portland Harbor and the costs to society of doing so. For example, let's suppose that EPA has completed the risk calculations and determined an appropriate clean-up action for Portland Harbor. Let's further suppose that the cost of completing such clean-up is estimated to be \$100-million dollars. EPA then publishes its recommended clean-up strategy and estimated costs in a "Proposed Plan"; this document is released to the public for their review and comment, as required by the Comprehensive Response Compensation and Liability Act (CERCLA), the Federal law we are using here at EPA to clean up Portland Harbor. The public may decide that it does not like the balance EPA has decided upon between the amount of cleanup and the cost of that cleanup. Based on such comments, EPA may or may not adjust this balance based on the comments received, and then publish our final cleanup recommendation in a "Record of Decision". Finding the balance between the amount of required cleanup and the costs of that cleanup to society is usually our biggest obstacle.

3) What are the solutions and methods for cleaning and maintaining the river?

*sediment*  
Methods for cleaning up existing contamination in the River are very limited: dredging contaminated sediment, capping contaminated sediment, and monitored natural attenuation (only monitoring as chemical concentrations gradually decrease). My best guess at this stage of the project is that we will likely be using all three strategies because the sediments are not uniformly contaminated throughout the River. Monitored natural attenuation is only possible in limited circumstances, so the overall strategy will likely include mostly dredging and capping. Keep in mind however that there are many areas in Portland Harbor which may not require any cleanup because the contaminant concentrations in those areas don't pose a risk to people or animals.

Methods for maintaining the River are many: proper management of chemicals used in industries along the river, proper management of storm water in the urbanized portions of the watershed, monitoring and control of chemical contaminants that may be entering Portland Harbor from sources far upstream, etc. Methods for maintaining the River are known, but implementing these methods over the entire Willamette River watershed to ensure Portland Harbor remains clean is a huge challenge. Our laws and regulations do not handle this issue very well, so it will be a creative process for all of us, surely extending into the time when your generation is making these decisions, to figure out the best methods for keeping Portland Harbor clean. We will implement some of these methods as part of our current Portland Harbor project, but many we don't even have the regulatory authority to control. That is where the future, creative challenge to your generation comes in.

4) Who will fund the necessary clean up? - *rule of polluter pays* - In general EPA endorses

The clean up is divided into two phases: the remedial investigation and feasibility study phase (RI/FS) and the remedial design and remedial action phase (RD/RA). We are currently in the RI/FS phase. The eight private corporations, City of Portland, and Port of Portland, who have signed an agreement with EPA, are funding the RI/FS, which will cost over \$10-million dollars.



We do not know who will fund the RD/RA phase yet. This decision gets made after the RI/FS phase is completed. EPA's intent is to find all potentially responsible parties (PRPs) since 1900 or so who may have contributed chemical contamination to Portland Harbor. This may include many hundreds of private companies and government agencies. We then go through an "allocation process", in which we decide the relative contribution of contaminants by the hundreds of PRPs. We then enter into an agreement with those parties to pay for the RD/RA phase in accordance with their allocation, or we use government funds (the "Superfund") to clean up Portland Harbor if the PRPs refuse to sign up to the RD/RA. If the PRPs refuse to participate, EPA then sues these parties after the cleanup is complete to get reimbursed for the cleanup costs. The intent of the law is that PRPs pay for the cleanup, one way or another.

If there is a share that can not be assigned to anyone - the "Superfund" process provides access to tax dollars to pay the orphan's share.

5) Can the Portland Harbor be cleaned?

Yes, Portland Harbor can be cleaned up. The only questions that remain are: 1) how much should be cleaned up to protect people and animals; 2) how much is society willing to pay for the clean up; and, 3) over what period of time will the clean up occur.

Thank you for your time, and any response would be greatly appreciated. If possible please respond by Sunday 12, 08, 02.

Sincerely

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Can it be fixed?  
How long will it take?

How much will it cost?  
Who will pay?  
Who is responsible?

What can I do?

Am I safe?

Are the fish and wildlife safe?

Is the water polluted?

What points in the process  
have Public Involvement.

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